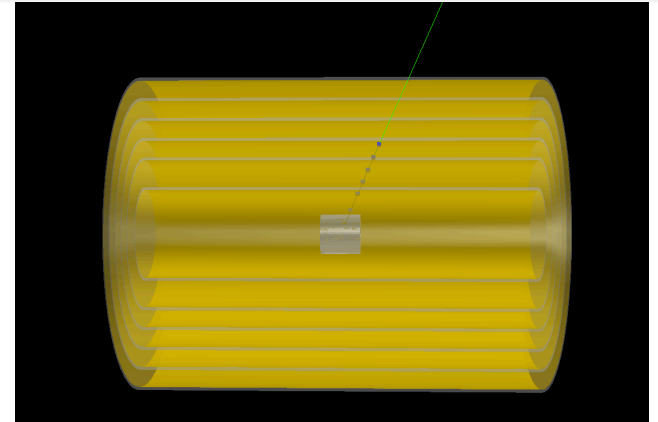
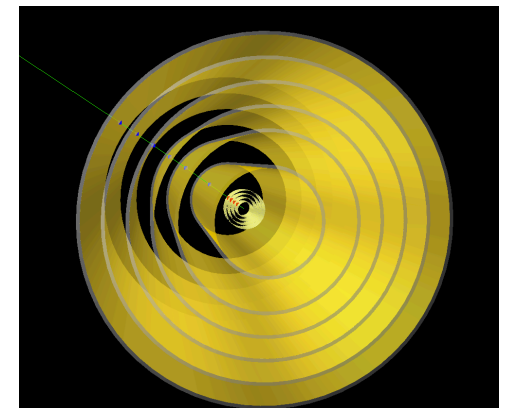


Detector Setup

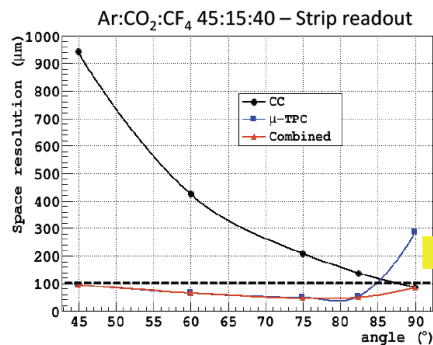
- Dead material (foil, readout foil) -- Yellow
 - $X_{0,material} = 0.172 \%$
 - Detector material thickness: $\frac{X_{0,material}}{100} * X_{0,Carbon} = 0.32 \text{ mm}$
 - $X_{0,Carbon} = 188 \text{ mm}$
- Gas -- Gray
 - Drift gap 15 mm
 - $X_{0,gas} = 15 \text{ mm}$ of ArCO₂ (70:30) (defined in EICRoot)
 - Each barrel layer is one sensitive volume (6 layers total).
- Detector Resolutions
 - Barrel: (50/100 μm , 100 μm) resolution in (*Transverse*, *Z*) (each gas barrel layer)
 - Barrel resolution based on INFN μRWELL μTPC prototype resolutions
 - Vertex Det: (20 μm , 20 μm) resolution in (*x*, *y*) (4 layers)



2m

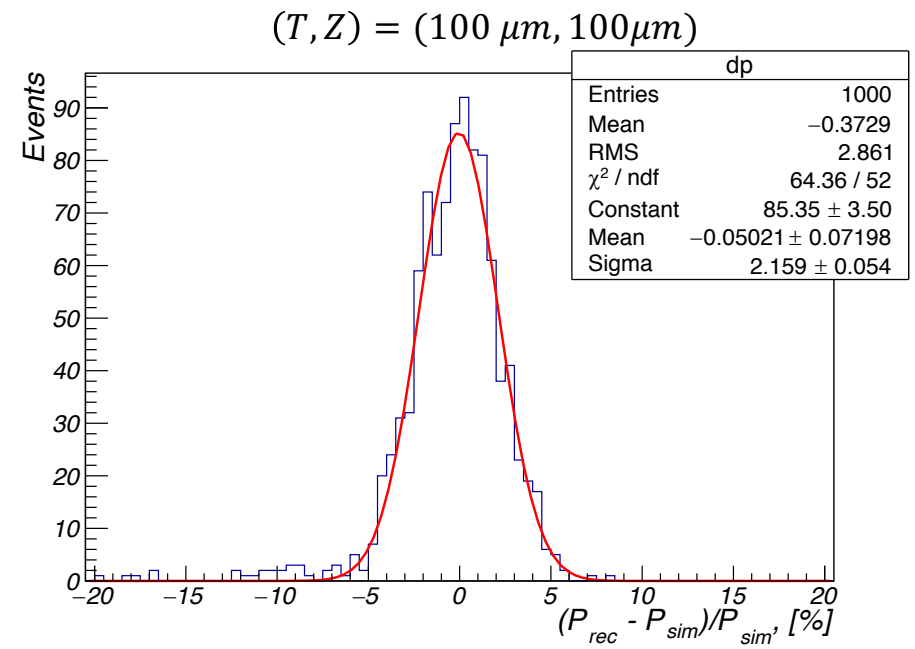
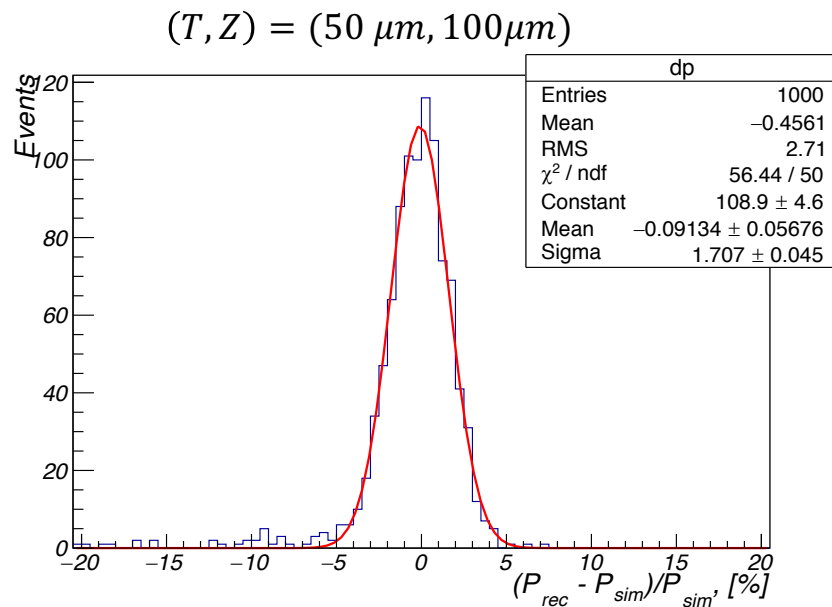


Radii from 225 mm
to 775 mm



INFN μRWELL μTPC results

Momentum Resolution



- 20 GeV electrons
- $B = 1.5 \text{ T}$
- $|\eta| < 1$